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IN THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

1. (previously presented) A system for treating plants containing biopolymers, comprising:
one or more repellant chemicals; and
one or more polymers, the polymers forming a matrix with the biopolymers and the repellant chemicals to permit sustained release of the chemicals, and
a silver ion forming an ionic complex with the matrix.
2. (previously presented) The system of claim 1, wherein the one or more repellant chemicals comprise at least one of synthetic organic, inorganic, biochemical, pharmacological and toxicological substances.
3. (currently amended) The system of claim 2, wherein at least one of the one or more repellant chemicals is derived from marine life, insect life, mammalian tissues, or cellular life forms, ~~or artificial and natural life forms.~~
4. (previously presented) The system of claim 1, wherein the one or more repellant chemicals comprise at least one plant-derived material.
5. (previously presented) The system of claim 1, wherein the one or more repellant chemicals are in the form of a powder and the one or more polymers is are in the form of a liquid.
6. (original) The system of claim 1, wherein the one or more polymers comprise naturally occurring hydrophilic polymers.
7. (previously presented) The system of claim 6, wherein the hydrophilic polymers comprise at least one of collagen, gelatin, dextrin and polypeptides.
- 8-9. (canceled)

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10. (original) The system of claim 1, wherein the one or more polymers comprise synthetic polymers.
11. (previously presented) The system of claim 10, wherein the synthetic polymers comprise at least one of self-assembled monolayers and a water insoluble amphiphilic polycation molecules.
12. (currently amended) The system of claim 1, wherein the one or more polymers comprise one or more natural, water-soluble polymers or resins selected from the group consisting of gums, guar gums, xanthan gums, starches, dextrans, proteins, celluloses, polysaccharides, dextrans, carrageenan, agar, alginates, gelatin, casein, pectin, soy bean, lignites, tannins, and deoxyribonucleic acid ~~and animal derivatives~~.
13. (original) The system of claim 1, wherein the one or more polymers comprise one or more synthetic, water-soluble polymers selected from the group consisting of polyvinyl alcohol, hydroxypropyl cellulose, maleic anhydride copolymers, polyacrylates, polyimines, polyethylene glycols, polyvinyl pyrrolidone, hydroxyethyl cellulose, hydroxypropylmethylcellulose, cellulose ethers, polyquaternary amines, modified polyesters, sodium carboxymethyl cellulose, hydrogels, acrylamide co-polymers, sorbitan esters and derivatives, polymeric surfactants, hydrocolloids, cationic polymers, anionic/nonionic polymers, and coagulating agents.
14. (previously presented) The system of claim 1, wherein the one or more polymers comprise a bioerodible polymers.
15. (previously presented) The system of claim 1, wherein the one or more polymers comprise an absorbable polymers.
16. (previously presented) The system of claim 1, wherein the one or more polymers comprise a controlled release polymers.

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17. (previously presented) The system of claim 1, wherein the one or more polymers comprise one or more high molecular weight, hydrophilic polymers.
18. (previously presented) The system of claim 1, wherein the one or more polymers comprise one or more high molecular weight, resorbable polymers.
19. (previously presented) The system of claim 1, wherein the one or more polymers comprise one or more hydrolytically and enzymatically degradable polymers.
20. (previously presented) The system of claim 1, wherein the one or more polymers comprise at least one of carboxy methyl cellulose, a polyorthoester, a pluronic polymer, and a lactide-glycolide co-polymer.
21. (original) The system of claim 1, wherein the one or more polymers comprise one or more of methyl cellulose and carboxy methyl cellulose.
22. (original) The system of claim 1, wherein the one or more polymers comprise pluronic F-127.
23. (currently amended) The system of claim 1, wherein the one or more repellant chemicals comprise ~~one or more alkaloids~~ an alkaloid isolated from ~~one or more members~~ a member of the family Amaryllidaceae and the family Liliaceae..
24. (currently amended) The system of claim 1, wherein the one or more repellant chemicals comprise ~~one or more alkaloids~~ an alkaloid isolated from ~~one or more members~~ a member of the genus Narcissus.
- 25-48. (canceled)

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49. (previously presented) A system for treating plants containing biopolymers, comprising:
one or more repellent chemicals; and
one or more polymers, the polymers forming a matrix with the biopolymers and the repellent chemicals to permit sustained release of the repellent chemicals, wherein the one or more polymers comprise a pluronic polymer.
50. (previously presented) The system of claim 49, wherein the one or more repellent chemicals comprise at least one of synthetic organic, inorganic, biochemical, pharmacological and toxicological substances.
51. (currently amended) The system of claim 50, wherein at least one of the one or more repellent chemicals is derived from at least one of marine life, insect life, mammalian tissues, or cellular life forms, ~~or artificial and natural life forms~~.
52. (previously presented) The system of claim 49, wherein the one or more repellent chemicals comprise at least one plant-derived material.
53. (previously presented) The system of claim 49, wherein the one or more repellent chemicals are in the form of a powder and the one or more polymers are in the form of a liquid.
54. (currently amended) The system of claim 49, wherein the one or more polymers further comprise at least one naturally occurring hydrophilic polymer.
55. (previously presented) The system of claim 54, wherein the hydrophilic polymer is collagen, gelatin, dextrin or a polypeptide.
56. (previously presented) The system of claim 49, wherein at least one of the one or more polymers comprises a charged ion, said charged ion forming an ionic complex with the one or more repellent chemical.

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57. (previously presented) The system of claim 56, wherein the charged ion is a silver ion.
58. (currently amended) The system of claim 49, wherein the one or more polymers further comprise at least one synthetic polymer.
59. (previously presented) The system of claim 58, wherein the synthetic polymer is selected from the group consisting of self-assembled monolayers and water insoluble amphiphilic polycation molecules.
60. (currently amended) The system of claim 49, wherein the one or more polymers further comprise one or more of natural, water-soluble polymers or resins selected from the group consisting of gums, guar gums, xanthan gums, starches, dextrans, proteins, celluloses, polysaccharides, dextrans, carrageenan, agar, alginates, gelatin, casein, pectin, soy bean, lignites, tannins, and deoxyribonucleic acid ~~and animal derivatives~~.
61. (currently amended) The system of claim 49, wherein the one or more polymers further comprise one or more of synthetic, water-soluble polymers selected from the group consisting of polyvinyl alcohol, hydroxypropyl cellulose, maleic anhydride copolymers, polyacrylates, polyimines, polyethylene glycols, polyvinyl pyrrolidone, hydroxyethyl cellulose, hydroxypropylmethylcellulose, cellulose ethers, polyquaternary amines, modified polyesters, sodium carboxymethyl cellulose, hydrogels, acrylamide co-polymers, sorbitan esters and derivatives, polymeric surfactants, hydrocolloids, cationic polymers, anionic/nonionic polymers, and coagulating agents.
62. (currently amended) The system of claim 49, wherein the one or more polymers further comprise a bioerodible polymer.
63. (currently amended) The system of claim 49, wherein the one or more polymers further comprise an absorbable polymer.

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64. (currently amended) The system of claim 49, wherein the one or more polymers further comprise a controlled release polymer.
65. (currently amended) The system of claim 49, wherein the one or more polymers further comprise a high molecular weight, hydrophilic polymer.
66. (currently amended) The system of claim 49, wherein the one or more polymers further comprise a high molecular weight, resorbable polymer.
67. (currently amended) The system of claim 49, wherein the one or more polymers further comprise one or more hydrolytically and enzymatically degradable polymers.
68. (currently amended) The system of claim 49, wherein the one or more polymers further comprise at least one of carboxy methyl cellulose, a polyorthoester, and a lactide-glycolide co-polymer.
69. (currently amended) The system of claim 49, wherein the one or more polymers further comprise one or more of methyl cellulose and carboxy methyl cellulose.
70. (currently amended) The system of claim 49, wherein the one or more repellant chemicals comprise ~~one or more alkaloids~~ an alkaloid isolated from ~~one or more members~~ a member of the family Amaryllidaceae ~~and the family Liliaceae~~.
71. (currently amended) The system of claim 49, wherein the one or more repellant chemicals comprise ~~one or more alkaloids~~ an alkaloid isolated from ~~one or more members~~ a member of the genus Narcissus.
72. (previously presented) The system of claim 49, wherein the pluronic polymer is pluronic F-127.

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